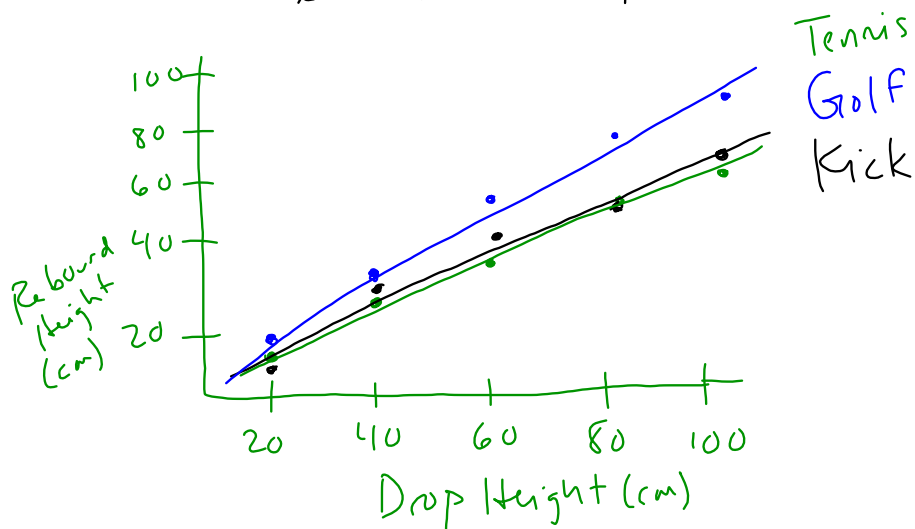


	Volley	Tennis	Golf	Wiffle	Lacrosse	Kick	Racquet	Soccer
20 cm	12	15	17	6	15	10	10	11
40 cm	24	25	33	15	21	28	27	28
60 cm	47	36	49	24	35	40	40	38
80 cm	55	50	67	30	49	48	52	55
100 cm	72	55	82	39	57	68	63	68

Graph \emptyset cm \rightarrow 100 cm on x-axis
 \emptyset cm \rightarrow 100 cm on y-axis



$$\begin{aligned}
 \text{Slope} &= \frac{\text{rise}}{\text{run}} \\
 &= \frac{\text{rebound height}}{\text{drop height}} \\
 &= \frac{\text{rebound at 100 cm} - \text{rebound at 20 cm}}{100 \text{ cm} - 20 \text{ cm}}
 \end{aligned}$$

$$\text{Slope} = \text{Efficiency}$$

Efficiency is how well the energy is transferred in a scenario.

$$GPE = m a_g h$$

Slopes:

$$\text{Soccer} = 0.71 \quad 4$$

$$\text{Volley} = 0.75 \quad 2$$

$$\text{Tennis} = 0.50 \quad 7$$

$$\text{Golf} = 0.81 \quad 1$$

$$\text{Wiffle} = 0.41 \quad 8$$

$$\text{Lacrosse} = 0.53 \quad 6$$

$$\text{Kick} = 0.73 \quad 3$$

$$\text{Racquet} = 0.66 \quad 5$$

Work \rightarrow anything that causes
a change in energy

\rightarrow occurs when \vec{F} and \vec{d}
are in the same direction

